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09/604,939	06/27/2000	Marco A. DeMello	MSFT-0186/154572.1	5227

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EXAMINER

ZHEN, LI B

ART UNIT

PAPER NUMBER

2126

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14

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/604,939

Applicant(s)

DEMELLO ET AL.

Examiner

Li B. Zhen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 1-13 and 30-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 14 – 29 are pending in the application. Claims 1 – 13 and 30 – 36 are withdrawn from consideration.

Election/Restrictions

2. Applicant's election without traverse of claims 14 – 29 in Paper No. 11 is acknowledged. Please cancel the non-elected claims.

Drawings

3. Drawings filed on June 27, 2000 are objected to by the draftsman under 37 CFR 1.84 or 1.152 for the reasons indicated on Form PTO-948 included as an attachment to this paper.

Specification

4. The abstract of the disclosure is objected to because it exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

5. Applicant's specification [p. 49, line 23 – p. 56, line 30] includes computer program listing having over 300 lines. Any computer program listing having over 300 lines (up to 72 characters per line) must, be submitted on a compact disc in compliance with § 1.52(e). A compact disc containing such a computer program listing is to be referred to as a "computer program listing appendix." The "computer program listing

appendix" will not be part of the printed patent. The specification must include a reference to the "computer program listing appendix" at the location indicated in § 1.77(b)(4). See 37 CFR 1.96 (c).

6. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code [p. 13, 14, 28 and 57] . Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 101

8. Claims 21 – 29 are rejected under 35 U.S.C. 101 because they are directed to non-statutory subject matter.

9. Claims 21 – 29 are directed to method steps which can be practiced mentally in conjunction with pen and paper, therefore they are directed to non-statutory subject matter. Specifically, as claimed, it is uncertain what performs each of the claimed method steps. Moreover, each of the claimed steps, inter alia, receiving, determining, obtaining, providing, storing, receiving and sending can be practiced mentally in

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conjunctions with pen and paper. The claimed steps do not define a machine or computer implemented process [see MPEP 2106]. Therefore, the claimed invention is directed to non-statutory subject matter. (The examiner suggests applicant to change "method" to "computer implemented methods" in the preamble to overcome the outstanding 35 U.S.C. 101 rejection).

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 29 recites a computer-readable medium but depends from method claim

21. It is unclear if claim 29 is claiming a product or method.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 14 – 19 and 21 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent NO. 6,718,361 to Basani in view of U.S. Patent Application Publication NO. 2002/0002611 to Vange.

15. As to claim 14, Basani teaches the invention substantially as claimed including a system for providing a content item [apparatus for efficient and reliable control and distribution of data files; col. 4, lines 60 – 67], the system comprising:

a plurality of download servers [servers 26, 28 constituting elected group leaders 30 for distributing content or content changes to distribution agents 32, 34 in each cluster 24, Fig. 1; col. 8, lines 20 – 36], wherein each download server receives a request for the content item [users can begin to access the updated content from any of the servers 26, 28. User access to content on a given server can be efficiently managed, according to service level agreements; col. 8, lines 20 – 37], each of the download servers having:

a cache which stores the content item [a list of files currently contained in each network cache 617 on each network segment; col. 20, lines 35 – 52]; and

a first object [elected group leaders 30 for distributing content or content changes, Fig. 1; col. 8, lines 20 – 38] which receives a first message to invalidate the content item in the cache [CCM and/or GL will send invalidation messages to the cache on each network segment; col. 20, lines 35 – 52] and which invalidates the content item in the cache in response to receipt of the first message [When a content update occurs, the list of files contained in the cache will be compared, and new content will be

automatically distributed to the network cache. This guarantees that content being served from network caches is always up to date and fresh; col. 37 – 54]; and

a fulfillment server [distribution server 16, Fig. 1; col. 8, lines 20 – 38] having:

a content store which stores the content item [Content is then turned over to the centralized Content Control Manager (CCM) 18, running on the distribution server 16; col. 8, lines 45 – 60]; and

a first database which stores information relating to the content item [database 22 is a centralized repository for storing configuration information, policies, job information, status logs, snapshots and checkpoints; col. 9, lines 45 – 54]; and

a second object [CCM] which receives a notification [CCM contains an assignment creator and manager 44 which responds to scheduler job requests to initiate a distribution job; col. 12, lines 43 – 55] that the information in the first database has been updated or deleted [Administrative inputs for the content mover 18 are...stored in the database 22....Content Update job is defined as the collection of information that defines what content is to be updated, where it is to be distributed to, when and how often it is distributed, and what policies/rules apply; col. 9, lines 13 – 45], and which generates, in response to the notification, the first message [invalidation messages] for dispatch to the plurality of download servers [CCM and/or GL will send invalidation messages to the cache on each network segment; col. 20, lines 35 – 52].

16. Although Basani clearly teaches download server for storing content items [servers 26, 28 constituting elected group leaders 30 for distributing content or content changes, Fig. 1; col. 8, lines 20 – 36] and caches [a list of files currently contained in

each network cache 617 on each network segment; col. 20, lines 35 – 52], Basani does not specifically teach each download server containing a cache.

However, Vange teaches a content distribution system [a web site delivery system in which a plurality of front-end web servers and back-end web servers cooperate to deliver content and services of the web site; paragraph (0026), p. 3] that includes download servers [front-end 201; paragraph (0066), p. 7 – 8] that each contain a cache [caching mechanism 403, Fig. 5; paragraph (0070), p. 8].

17. It would have been obvious to a person of ordinarily skilled in the art at the time of the invention to apply the teaching of including a cache in each download server as taught by Vange to the invention of Basani because a cache provides fast content retrieval by storing frequently and/or recently accessed web pages or network resources that are anticipated to be accessed [paragraph (0070), p. 8 of Vange].

18. As to claim 15, Basani as modified teaches the fulfillment server further includes a second database which stores a log of events [status logs] occurring on the plurality of download servers [database 22 is a centralized repository for storing configuration information, policies, job information, status logs; col. 9, lines 45 – 55 of Basani], wherein each of the plurality of download servers generates a second message for dispatch to the fulfillment server in response to the events [Each server then sends its report to the GL, the-GLs send their own reports to the CCM, and the commit status reports are processed and logged by the CCM; col. 20, lines 2 – 15 of Basani], and the second object receives the second message and logs the events in the second

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database [CCM updates the database for every report received; col. 20, lines 3 – 15 of Basani].

19. As to claim 16, Basani as modified teaches the events include the downloading of the content item to a purchaser of the content item [invention also dovetails with existing performance-oriented products so that service-level reporting can be generated; col. 7, lines 25 – 60 of Basani].

20. As to claim 17, Basani as modified teaches the content item is sold by a retailer for download by one of the plurality of download servers [Some packets will comprise data that need be supplied to web server 210 (e.g., customer credit information, form data and the like); paragraph (0071), p. 8 of Vange], and wherein the first database further stores information relating to the retailer [CCM updates the database used for tracking network status, and updates the list of members that are available to participate in the content groups; col. 15, lines 18 – 49 of Basani].

21. As to claim 18, Basani as modified teaches the plurality of download servers is hosted by the retailer [web site is owned by the content provider such as an e-commerce vendor whereas a web server refers to set of programs running on one or more machines coupled to an Internet, intranet, or other network node. The web site 210 may be hosted on the site owner's own web server, or hosted on a web server owned by a third party; paragraph (0039), p. 4 – 5 of Vange].

22. As to claim 19, Basani as modified teaches the download servers provide the content item for durable storage on one or more computing devices associated with consumers of the content item [digitized information files such as text, photos, videos, voice, or interactive games can be more efficiently managed and more efficiently accessed by content users of the Internet if the content is intelligently placed on a large number of distributed sites. Two distributed sites 24A, 24B are illustrated, each containing a number of file servers 26, 28; col. 8, lines 37 – 45 of Basani].

23. As to claim 21, Basani as modified teaches a plurality of servers to distribute a content item [apparatus for efficient and reliable control and distribution of data files; col. 4, lines 60 – 67 of Basani], the method comprising the acts of:

receiving, at a first of the plurality of servers from a first computing device [servers 26, 28 constituting elected group leaders 30 for distributing content or content changes to distribution agents 32, 34 in each cluster 24, Fig. 1; col. 8, lines 20 – 36 of Basani], a request for the content item [users can begin to access the updated content from any of the servers 26, 28. User access to content on a given server can be efficiently managed, according to service level agreements; col. 8, lines 20 – 37 of Basani], the first server having a first cache [caching mechanism 403, Fig. 5; paragraph (0070), p. 8 of Vange];

determining that no valid copy of the content item exists in the first cache [When the requested data is not within cache 403; paragraph (0070) and (0071), p. 8 of Vange];

obtaining the content item at the first server from a content store [When the requested data is not within cache 403, a request is processed to web server 210; paragraph (0070) and (0071), p. 8 of Vange];

providing the content item to the first computing device [When the requested data is not within cache 403, a request is processed to web server 210, and the returned data may be stored in cache 403; paragraph (0070) and (0071), p. 8 of Vange];

storing the content item in the first cache [the returned data may be stored in cache 403; paragraph (0070) and (0071), p. 8 of Vange];

receiving, at a fulfillment server [distribution server 16, Fig. 1; col. 8, lines 20 – 38 of Basani], a change to an attribute of the content item [Administrative inputs for the content mover 18 are...stored in the database 22....Content Update job is defined as the collection of information that defines what content is to be updated, where it is to be distributed to, when and how often it is distributed, and what policies/rules apply; col. 9, lines 13 – 45 of Basani]; the fulfillment server sending a notification to the plurality of servers in response to the change [CCM and/or GL will send invalidation messages to the cache on each network segment; col. 20, lines 35 – 52 of Basani]; and

the first server invalidating the copy of the content item in the first cache [When a content update occurs, the list of files contained in the cache will be compared, and new content will be automatically distributed to the network cache. This guarantees that

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content being served from network caches is always up to date and fresh; col. 37 – 54 of Basani] in response to the notification [CCM and/or GL will send invalidation messages to the cache on each network segment; col. 20, lines 35 – 52 of Basani].

24. As to claim 22, Basani as modified teaches a store-and-forward messaging facility [store-and-forward distribution using a tree; col. 17, lines 10 – 45 of Basani].

25. As to claim 23, Basani as modified teaches the change comprises a change in a physical location of the content item [domain:address mappings within the DNS system are modified; paragraph (0063), p. 7 of Vange].

26. As to claim 24, Basani as modified teaches the change comprises a change in a level of protection to be applied to the content item [CCM then communicates with other management services to obtain information about the task details and policy settings of the job; col. 10, lines 35 – 52 of Basani].

27. As to claim 25, Basani as modified teaches encrypted content [Encryption provides data privacy and hash provides for delivery integrity; col. 10, lines 50 – 65 of Basani], and a first cryptographic key which decrypts the encrypted content [a symmetric key cipher such as Data Encryption Standard (DES); col. 10, lines 50 – 65 of Basani].

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28. As to claim 26, Basani as modified teaches metadata, wherein the first cryptographic key is sealed with the meta-data [entire assignment file, or an updated file component of an assignment can be hashed and encrypted according to user policies and implemented in the CCM, GLs, and BESs, by means that are known in the art, such as MD5 or SHA1 hash; col. 10, lines 50 – 65 of Basani].

29. As to claim 27, Basani as modified teaches the encrypted content is stored in the cache separately from the first cryptographic key [assignment file, or an updated file component of an assignment can be hashed and encrypted according to user policies and implemented in the CCM, GLs, and BESs, by means that are known in the art, such as MD5 or SHA1 hash and a symmetric key cipher such as Data Encryption Standard (DES); col. 10, lines 50 – 65 of Basani].

30. As to claim 28, Basani as modified teaches the change comprises a change in the meta-data of the content item [assignment message contains instructions for creating, moving/copying, removing, or modifying directories or file content on remote servers, including parameters for any required compression and encryption; col. 5, lines 55 – 67 of Basani].

31. As to claim 29 (note the 35 USC 112, second paragraph rejection above), Basani as modified teaches a computer-readable medium having computer-executable instructions to perform the method of claim 21 [distributed storage implemented in each

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device and typically includes some mass storage device coupled to or managed by a server computer; paragraph (0029), p. 3 of Vange].

32. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Basani as modified by Vange further in view of U.S. Patent NO. 6,425,017 to Dievendorff [cited in the previous office action].

33. As to claim 20, Basani as modified does not specifically teach MSMQ independent clients.

34. However, Dievendorff teaches MSMQ independent clients [client's method invocations with their call parameters and associated data into messages, and also uses a messaging queuing API (such as, the "Microsoft Message Queue" or "MSMQ") to place the messages in a method invocations message queue 158; col. 12, line 55 – col. 13, line 15].

35. It would have been obvious to a person of ordinary skilled in the art at the time of the invention to apply the teaching of MSMQ independent clients as taught by Dievendorff to the invention of Basani as modified because this allows a client to continue execution asynchronously from a invoked method by automatically queuing the method invocation, and issue the queued method invocation to the object at a potentially later time [col. 5, lines 1 - 17 of Dievendorff].

Conclusion

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (703) 305-3406. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2126

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April 22, 2004


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